

PATENT COOPERATION TREATY

PCT

REC'D 16 DEC 2004

WIPO PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference YL03018PCT | FOR FURTHER ACTION | See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |
| International application No. PCT/KR2003/002704 | International filing date (day/month/year) 10 DECEMBER 2003 (10.12.2003) | Priority date (day/month/year) 11 DECEMBER 2002 (11.12.2002) |
| International Patent Classification (IPC) or national classification and IPC IPC7 C12N 1/20 | | |
| Applicant CJ CORPORATION et al | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

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|--|---|
| Date of submission of the demand 28 APRIL 2004 (28.04.2004) | Date of completion of this report 04 DECEMBER 2004 (04.12.2004) |
| Name and mailing address of the IPEA/KR Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140 | Authorized officer LEE, CHUNG HO Telephone No. 82-42-481-8160 |



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/002704

I. Basis of the report

1. With regard to the elements of the international application:*

 the international application as originally filed the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement) under Article 19

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the drawings:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. The amendments have resulted in the cancellation of: the description, pages _____ the claims, Nos. _____ the drawings, sheets _____

5.

 This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/002704

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

| | | | |
|-------------------------------|--------|-----|-----|
| Novelty (N) | Claims | 1-2 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1-2 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1-2 | YES |
| | Claims | | NO |

2. Citations and explanations (Rule 70.7)

The following documents have been considered for the purpose of this report:

D1: JP 12-295996 A (KYOWA HAKKO KOGYO CO., LTD.), 24 Oct. 2000.

D2: KR 2002-57470 A (C.J. CORP.), 11 Jul. 2002.

1. Novelty and Inventive Step

Claims 1-2 relate to a special strain, *Corynebacterium ammoniagenes* CJXSP 0201 (KCCM 10448) which can rapidly overcome growth-standing phase on early culture and produce 5'-xanthyllic acid; and a method of producing 5'-xanthyllic acid characterized by using the same microorganism.

In D1 and D2, a new microorganism, *Corynebacterium ammoniagenes*, for the production of 5'-xanthyllic acid and a method for producing 5'-xanthyllic acid using the same are described.

Compared with the present invention, none of the above-mentioned prior art documents disclose the special strain of the present application and the method of producing 5'-xanthyllic acid using the same microorganism. In addition, the present invention is not considered to be easily invented by a person skilled in the art by using the teachings of D1 and D2.

Therefore, the subject matter of claims 1-2 of the present application comply with the requirements of novelty and inventive step under PCT Article 33(2) and (3).

II. Industrial Applicability

There is no reason for forming a negative opinion about the industrial applicability of this invention. Consequently, claims 1-2 appear to meet the requirement of PCT Article 33(4).